

208040" 49E08660

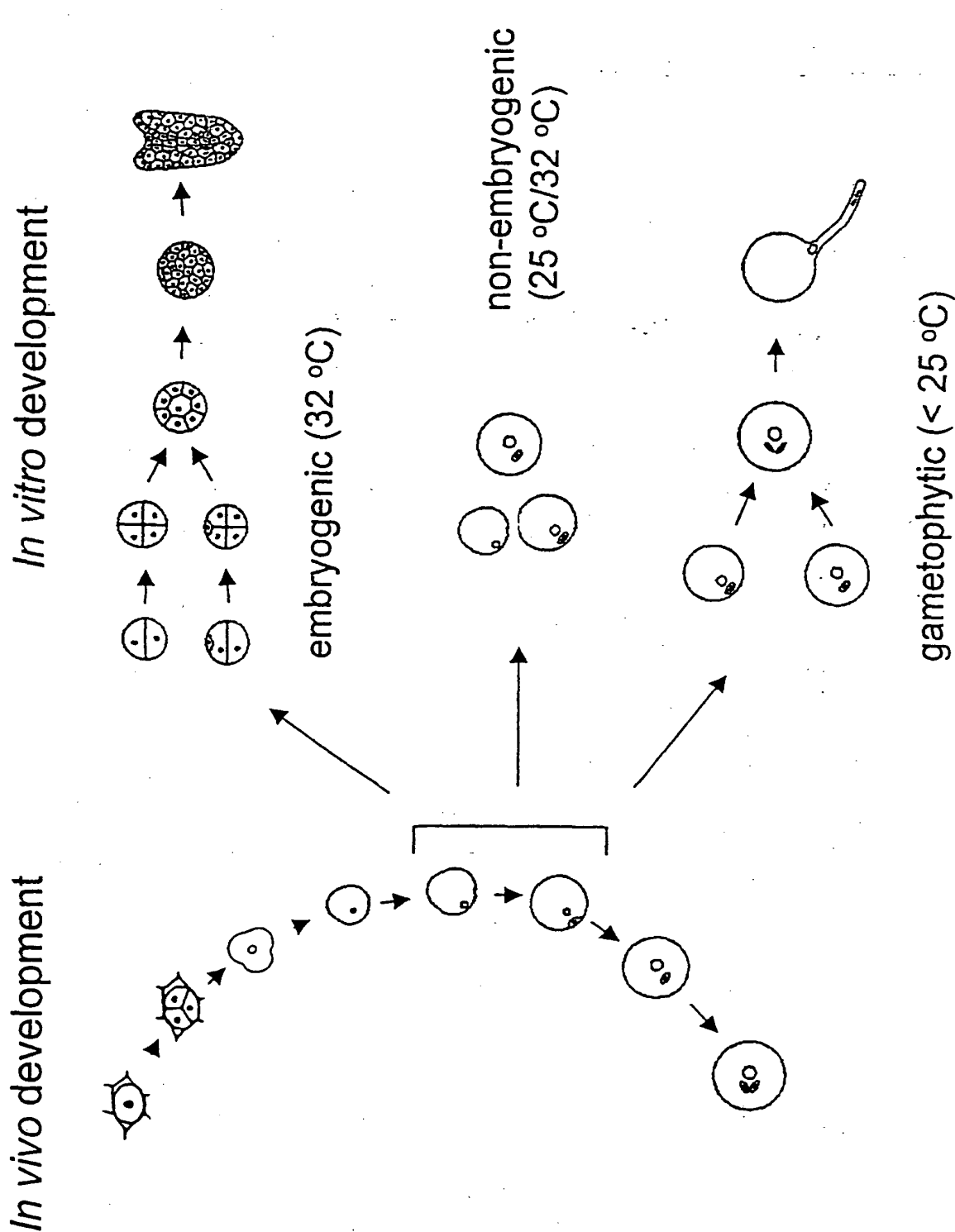


FIGURE 1

FIGURE 2

BNM3A GTTCATCTCTCTCTTTAAGACCAAAACCTTTTTCTCCTCCTCTTCATGCATGAACCTA 60  
BNM3B -----

BNM3A ACTAAGTTCTTCTCTTTTACCTTTTACCAAGAACTCGTTAGATCACTCTCTGAACTCAA 120  
BNM3B -----TTCTTCTTTTACCTTTTACCAAGAACTCGTTAGATCATTTTCTGAACTCGA 51  
\*\*\*\*\*

BNM3A TGAATAATAACTGGTTAGGCTTTTCTCTCTCTCCTTATGAACAAAATCACCATCGTAAGG 180  
BNM3B TGAATAATAACTGGTTAGGCTTTTCTCTCTCTCCTTATGAACAAAATCACCATCGTAAGG 111  
\*\*\*\*\*

BNM3A ACGTCTACTCTTCCACCACCACAACCGTCGTAGATGTCGCCGAGAGTACTGTTACGATC 240  
BNM3B ACGTCTGCTCTTCCACCACCACAACCGCCGTAGATGTCGCCGAGAGTACTGTTACGATC 171  
\*\*\*\*\*

BNM3A CGACCGCTGCCTCCGATGAGTCTTCAGCCATCCAAACATCGTTTCCTTCTCCCTTTGGTG 300  
BNM3B CGACCGCTGCCTCCGATGAGTCTTCAGCCATCCAAACATCGTTTCCTTCTCCCTTTGGTG 231  
\*\*\*\*\*

BNM3A TCGTCGTCGATGCTTTTACCAGAGACAACAATAGTCACTCCCGAGATTGGGACATCAATG 360  
BNM3B TCGTCCTCGATGCTTTTACCAGAGACAACAATAGTCACTCCCGAGATTGGGACATCAATG 291  
\*\*\*\*\*

BNM3A GTTGTGCATGCAATAACATCCACAACGATGAGCAAGATGGACCAAAGCTTGAGAATTTCC 420  
BNM3B GTAGTGCAATGTAATAACATCCACAATGATGAGCAAGATGGACCAAAGCTTGAGAATTTCC 351  
\*\* \*\*\*\*\*

BNM3A TTGGCCGCACCACCACGATTTACAACACCAACGAAAACGTTGGAGATGGAAGTGGAAGTG 480  
BNM3B TTGGCCGCACCACCACGATTTACAACACCAACGAAAACGTTGGAGATATCGATGGAAGTG 411  
\*\*\*\*\*

BNM3A GCTGTTATGGAGGAGGAGACGGTGGTGGTGGCTCACTAGGACTTTGATGATAAAGACAT 540  
BNM3B GGTGTTATGGAGGAGGAGACGGTGGTGGTGGCTCACTAGGACTTTGATGATAAAGACAT 471  
\* \*\*\*\*\*

BNM3A GGCTGAGAAATCAACCCGTGGATAATGTTGATAATCAAGAAAATGGCAATGCTGCAAAAG 600  
BNM3B GGCTGAGAAATCAACCCGTGGATAATGTTGATAATCAAGAAAATGGCAATGCTGCAAAAG 531  
\*\*\*\*\*

BNM3A GCCTGTCCCTCTCAATGAACTCATCTACTTCTTGTGATAACAACAACGACAGCAATAACA 660  
BNM3B GCCTGTCCCTCTCAATGAACTCATCTACTTCTTGTGATAACAACAACGACAGCAATAACA 591  
\*\*\*\*\*

BNM3A ACGTTGTTGCCCAAGGGAAGACTATTGATGATAGCGTTGAAGCTACACCGAAGAAAATA 720  
BNM3B ACCTTGTTGCCCAAGGGAAGACTATTGATGATAGCGTTGAAGCTACACCGAAGAAAATA 651  
\*\* \*\*\*\*\*

BNM3A TTGAGAGTTTGGACAGAGGACGCTCTATATACCGCGGTGTTACAAGGCATCGGTGGACAG 780  
BNM3B TTGAGAGTTTGGACAGAGGACGCTCTATATACCGCGGTGTTACAAGGCATCGGTGGACAG 711  
\*\*\*\*\*

BNM3A GAAGATATGAGGCACATTTATGGGATAATAGTTGTAAAAGAGAAGGCCAAACGCGCAAAG 840  
BNM3B GAAGATATGAGGCACATTTATGGGATAATAGTTGTAAACGAGAAGGCCAAACGCGCAAAG 771  
\*\*\*\*\*

BNM3A GAAGACAAGTTTATTTGGGAGGTTATGACAAAGAAGAAAAAGCAGCTAGGGCTTATGATT 900  
BNM3B GAAGACAAGTTTATTTGGGAGGTTATGACAAAGAAGAAAAAGCAGCTAGGGCTTATGATT 831  
\*\*\*\*\*

09980364-49E08660

FIGURE 2(Cont'd)

BNM3A TAGCCGCACTCAAGTATTGGGGAACCACCACTACTACTAACTTCCCCATGAGCGAATATG 960  
BNM3B TAGCCGCACTCAAGTATTGGGGAACCACCACTACTACTAACTTCCCCATGAGCGAATATG 891  
\*\*\*\*\*

BNM3A AAAAAGAGGTAGAAGAGATGAAGCACATGACAAGGCAAGAGTATGTTGCCTCACTGCGCA 1020  
BNM3B AGAAAGAGATAGAAGAGATGAAGCACATGACAAGGCAAGAGTATGTTGCCTCACTTCGCA 951  
\* \*\*\*\*\*

BNM3A GGAAAAGTAGTGGTTTCTCTCGTGGTGCATCGATTTATCGTGGAGTAACAAGACATCACC 1080  
BNM3B GGAAAAGTAGTGGTTTCTCTCGTGGTGCATCGATTTATCGTGGAGTAACAAGACATCACC 1011  
\*\*\*\*\*

BNM3A AACATGGAAGATGGCAAGCTAGGATAGGAAGAGTCGCCGGTAACAAAGACCTCTACTTGG 1140  
BNM3B AACATGGAAGATGGCAAGCTAGGATAGGAAGAGTCGCCGGTAACAAAGACCTCTACTTGG 1071  
\*\*\*\*\*

BNM3A GAACTTTTGGCACACAAGAAGAAGCTGCAGAGGCATACGACATTGCGGCCATCAAATTCA 1200  
BNM3B GAACTTTTGGCACACAAGAAGAAGCTGCAGAGGCATACGACATTGCGGCCATCAAATTCA 1131  
\*\*\*\*\*

BNM3A GAGGATTAACCGCAGTGACTIONACTTCGACATGAACAGATAACAACGTTAAAGCAATCCTCG 1260  
BNM3B GAGGATTAACCGCAGTGACTIONACTTCGACATGAACAGATAACAACGTTAAAGCAATCCTCG 1191  
\*\*\*\*\*

BNM3A AAAGCCCTAGTCTTCTCTATTGGTAGCGCCGCAAAACGTTCTCAAGGAGGCTAACCGTCCGG 1320  
BNM3B AAAGCCCTAGTCTTCTCTATTGGTAGCGCCGCAAAACGTTCTCAAGGAGGCTAACCGTCCGG 1251  
\*\*\*\*\*

BNM3A TTCCAAGTATGATGATGATCAGTAATAACGTTTCAGAGAGTGAGAATAGTGCTAGCGGTT 1380  
BNM3B TTCCAAGTATGATGATGATCAGTAATAACGTTTCAGAGAGTGAGAATAATGCTAGCGGTT 1311  
\*\*\*\*\*

BNM3A GGCAAAACGCTGCGGTTTCAATCATCAGGGAGTAGATTTGAGCTTATTGCACCAACATC 1440  
BNM3B GGCAAAACGCTGCGGTTTCAATCATCAGGGAGTAGATTTGAGCTTATTGCAGCAACATC 1371  
\*\*\*\*\*

BNM3A AAGAGAGGTACAATGGTTATTATTACAATGGAGGAACTTGTCTTCGGAGAGTGCTAGGG 1500  
BNM3B AAGAGAGGTACAATGGTTATTATTACAATGGAGGAACTTGTCTTCGGAGAGTGCTAGGG 1431  
\*\*\*\*\*

BNM3A CTTGTTTCAAACAAGAGGATGATCAACACCATTCTTGAGCAACACGCAGAGCCTCATGA 1560  
BNM3B CTTGTTTCAAACAAGAGGATGATCAACACCATTCTTGAGCAACACGCAGAGCCTCATGA 1491  
\*\*\*\*\*

BNM3A CTAATATCGATCATCAAAGTTCTGTTTCGGATGATTCGGTTACTGTTTGTGGAATGTTG 1620  
BNM3B CTAATATCGATCATCAAAGTTCTGTTTCAGATGATTCGGTTACTGTTTGTGGAATGTTG 1551  
\*\*\*\*\*

BNM3A TTGGTTATGGTGGTTATCAAGGATTTGCAGCCCCGGTTAACTGCGATGCCTACGCTGCTA 1680  
BNM3B TTGGTTATGGTGGTTATCAAGGATTTGCAGCCCCGGTTAACTGCGATGCCTACGCTGCTA 1611  
\*\*\*\*\*

BNM3A GTGAGTTTGAATATAACGCAAGAAACCATTATTACTTTGCTCAGCAGCAGACCCAGC 1740  
BNM3B GTGAGTTTGAATATAACGCAAGAAACCATTATTACTTTGCTCAGCAGCAGACCCAGC 1671  
\*\*\*\*\*

BNM3A AGTCGCCAGGTGGAGATTTTCCCGCGGCAATGACGAATAATGTTGGCTCTAATATGTATT 1800  
BNM3B ATTGCCAGGAGGAGATTTTCCCGCGGCAATGACGAATAATGTTGGCTCTAATATGTATT 1731  
\* \*\*\*\*\*

BNM3A ACCATGGGGAAGGTGGTGGAGAAGTTGCTCCAACATTTACAGTTTGGAAACGACAATTAGA 1860  
BNM3B ACCATGGGGAAGGTGGTGGAGAAGTTGCTCCAACATTTACAGTTTGGAAACGACAATTAGA 1791  
\*\*\*\*\*

09980364-040802

## FIGURE 2(Cont'd)

```

BNM3A  AAAAAATAGTTAAAGATCTTTAGTTATATGCGTTGTTGTGTGCTGGTGAACAGTGTGATAC  1920
BNM3B  AATAATAGTTAAAGATCTTTAGTTATATGCGTTGTTGTGTGCTGGTGAACAGTTTGATAC  1851
**  ***** ** *****

BNM3A  TTTGATTATGTTTTTTCTTTCTCTTTTCTTTTCTTGGTTAATTTCTTAAGACTTATT  1980
BNM3B  TTTGATTATGTTTTTT--TTTCTCTTTTCATTTTGTGTTAGTTTCTTAAGACTTATT  1909
*****

BNM3A  TTTAGTTTCCATTAGTTGGATAAAATTTTCAGACT-----  2014
BNM3B  TTTTGTTCATTAGTTGGATAAAATTTTCGGACTTAAGGGTCACTTCTGTTCTGACTTCT  1969
*** *****

BNM3A  -----
BNM3B  GTCTAATACAGAAAAGTTTTCAT  1992

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5/11

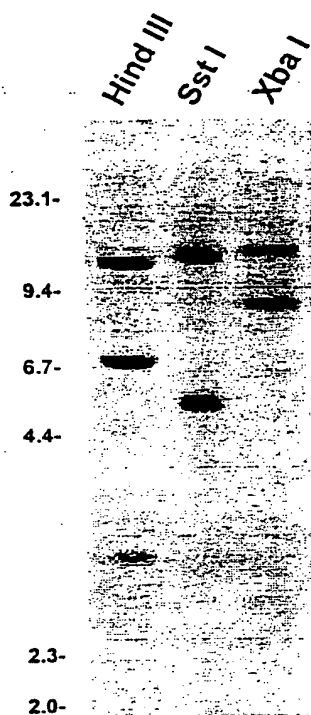
FIGURE 3

BNM3A MNMNWLGFSLSPYEQNHHRKDVYSSTTTTVDVAGEYCYDPTAASDESSAIQTSFSPSPFG 60  
BNM3B MNMNWLGFSLSPYEQNHHRKDVCSSTTTTAVDVAGEYCYDPTAASDESSAIQTSFSPSPFG  
\*\*\*\*\*  
BNM3A VVVD AFTRDNNSHSRDWDINGCACNNIHND EQDGP KLENFLGR TTTIYNTNENVG DGSGS 120  
BNM3B VVLD AFTRDNNSHSRDWDINGSACNNIHND EQDGP KLENFLGR TTTIYNTNENVG D IDGS  
\*\*\*\*\*  
BNM3A GCGGGDGGGSLGLSMIKTWLRNQPVDNVDNQENGNAAGLSLSMNSSTSCDNNNDSNN 180  
BNM3B GCGGGDGGGSLGLSMIKTWLRNQPVDNVDNQENGNGAKLSLSMNSSTSCDNNNYSSN  
\*\*\*\*\*  
repeat 1  
BNM3A NVVAQGKTIDDSVEATPKKTIESFGQRTSIYRGVTRHRWTGRYEAHLWDNSCKREGQTRK 240  
BNM3B NLVAQGKTIDDSVEATPKKTIESFGQRTSIYRGVTRHRWTGRYEAHLWDNSCKREGQTRK  
\*\*\*\*\*  
BNM3A GRQVYLGGYDKKEKAARAYDLAALKYWGT TTTTTFPMSEYEKEVEEMKHMTRQEYVASLR 300  
BNM3B GRQVYLGGYDKKEKAARAYDLAALKYWGT TTTTTFPMSEYEKEVEEMKHMTRQEYVASLR  
\*\*\*\*\*  
repeat 2  
BNM3A RKSSGFSRGASIYRGVTRHHQHGRWQARIGRVAGNKDLYLGTFTGTQEEAAEAYDIAAIKF 360  
BNM3B RKSSGFSRGASIYRGVTRHHQHGRWQARIGRVAGNKDLYLGTFTGTQEEAAEAYDIAAIKF  
\*\*\*\*\*  
BNM3A RGLTAVTNFDMNRYNVKAILSPSLPIGSAAKRLKEANRPVPSMMMISNNVSESENSASG 420  
BNM3B RGLTAVTNFDMNRYNVKAILSPSLPIGSAAKRLKEANRPVPSMMMISNNVSEENNASG  
\*\*\*\*\*  
BNM3A WQNAAVQHHQGVDLSLLHQHQERYNGYYYNGGNLSSSESARACFKQEDDQHHFLSNTQSLM 480  
BNM3B WQNAAVQHHQGVDLSLLQQHQERYNGYYYNGGNLSSSESARACFKQEDDQHHFLSNTQSLM  
\*\*\*\*\*  
BNM3A TNIDHQSSVSDDSVTVCGNVVGYGGYQGFAAPVNC DAYAASEFDYNARNHYYFAQQQQTQ 540  
BNM3B TNIDHQSSVSDDSVTVCGNVVGYGGYQGFAAPVNC DAYAASEFDYNARNHYYFAQQQQTQ  
\*\*\*\*\*  
BNM3A QSPGGDFPAAMTNNVGSNMYHGE GGGEVAPTFTVWNDN 579  
BNM3B HSPGGDFPAAMTNNVGSNMYHGE GGGEVAPTFTVWNDN  
\*\*\*\*\*

0980364, 040802

Figure 4

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0980364-040802

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# FIGURE 5

## AP2 DOMAIN REPEAT 1

BNM3 TSIYRGVTRHRWTGRYEHLWDNSCKREGQTRKGRQVYLGGYDKKEKAARAYDLAALKYWGTTTTTTFPMSEYEKEV  
ANT T\*Q\*\*\*\*\*F\*K\*\*HS\*\*\*\*\*M\*\*\*\*\*PS\*H\*\*\*SAEN\*Q\*\*I  
ZM T\*\*\*\*\*E\*\*R\*\*\*\*\*S\*\*\*\*\*F\*\*\*\*\*P\*\*\*\*\*QV\*N\*\*\*L  
GL15 S\*Q\*\*\*\*\*FY\*R\*\*W\*S\*I\*\*C-----K\*\*\*\*\*F\*TAQA\*\*\*\*\*Q\*\*I\*FR\*LNADI\*\*TLDD\*KD\*M  
AP2 S\*Q\*\*\*\*\*FY\*R\*\*W\*S\*I\*\*C-----K\*\*\*\*\*F\*TAHA\*\*\*\*\*R\*\*I\*FR\*VEADI\*\*NIDD\*DDDL

## LINKER

BNM3 EEMKHMTRQEYVASLRRKSSGFSRG  
ANT \*D\*\*N\*\*\*\*\*H\*\*\*\*\*  
ZM \*\*\*S\*\*\*\*\*FI\*\*\*\*\*  
GL15 KK\*\*DLSKE\*F\*LV\*\*\*QGA\*\*V\*\*  
AP2 KQ\*TNL\*KE\*F\*HV\*\*\*Q\*T\*\*P\*\*

## AP2 DOMAIN REPEAT 2

BNM3 ASIYRGVTRHHQHGRWQARIGRVAGNKDLYLGTFGTQEAAEAYDIAAIKFRGLTAVTNFDMNRYNVKA  
ANT \*\*\*\*\*V\*\*\*\*\*TN\*\*\*\*\*IT\*\*D\*DR  
ZM \*\*\*\*\*S\*\*\*\*\*N\*\*\*\*\*L\*\*S\*\*D\*ES  
GL15 S\*RF\*\*\*\*\*-Q\*KC\*K\*\*E\*\*\*\*\*QLM\*K\*YV\*\*\*LYD\*ET\*\*\*Q\*\*K\*\*\*\*\*CY\*KE\*\*\*\*\*AQ\*S\*DKEL  
AP2 S\*K\*\*\*\*\*-L\*KC\*\*\*E\*\*M\*QFL\*K\*YV\*\*\*L\*D\*EV\*\*R\*\*\*K\*\*\*\*\*CN\*KD\*\*\*\*\*PSI\*DEEL

WO 00/75330

Inventor: BOCHTILER et al.  
Docket No: 62USWO  
Title: USE OF THE BNM3 TRANSCRIPTIONAL ACTIVATOR TO CONTROL PLANT EMBRYOGENESIS AND REGENERATION PROCESS  
Attorney Name: Gregory A. Sebold  
Phone No.: 612.336.4728  
Sheet 7 of 11

PCT/CA00/00642

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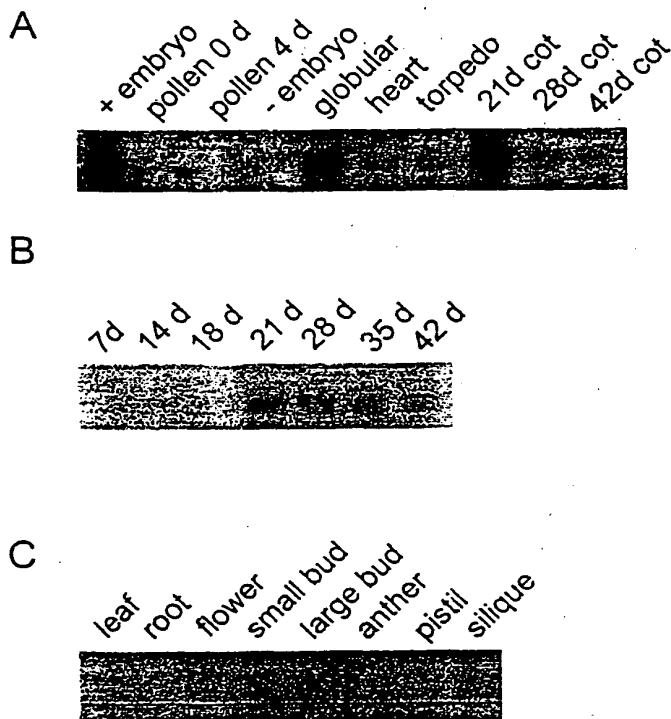
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WO 00/75330

Inventor: TILER et al.  
Docket: 0.62USWO  
Title: USE OF THE BNM3 TRANSCRIPTIONAL ACTIVATOR TO CONTROL PLANT  
EMBRYOGENESIS AND REGENERATION PROCESS  
Attorney Name: Gregory A. Sebald  
Phone No.: 612.336.4728  
Sheet 8 of 11

PCT/CA00/00642

FIGURE 6

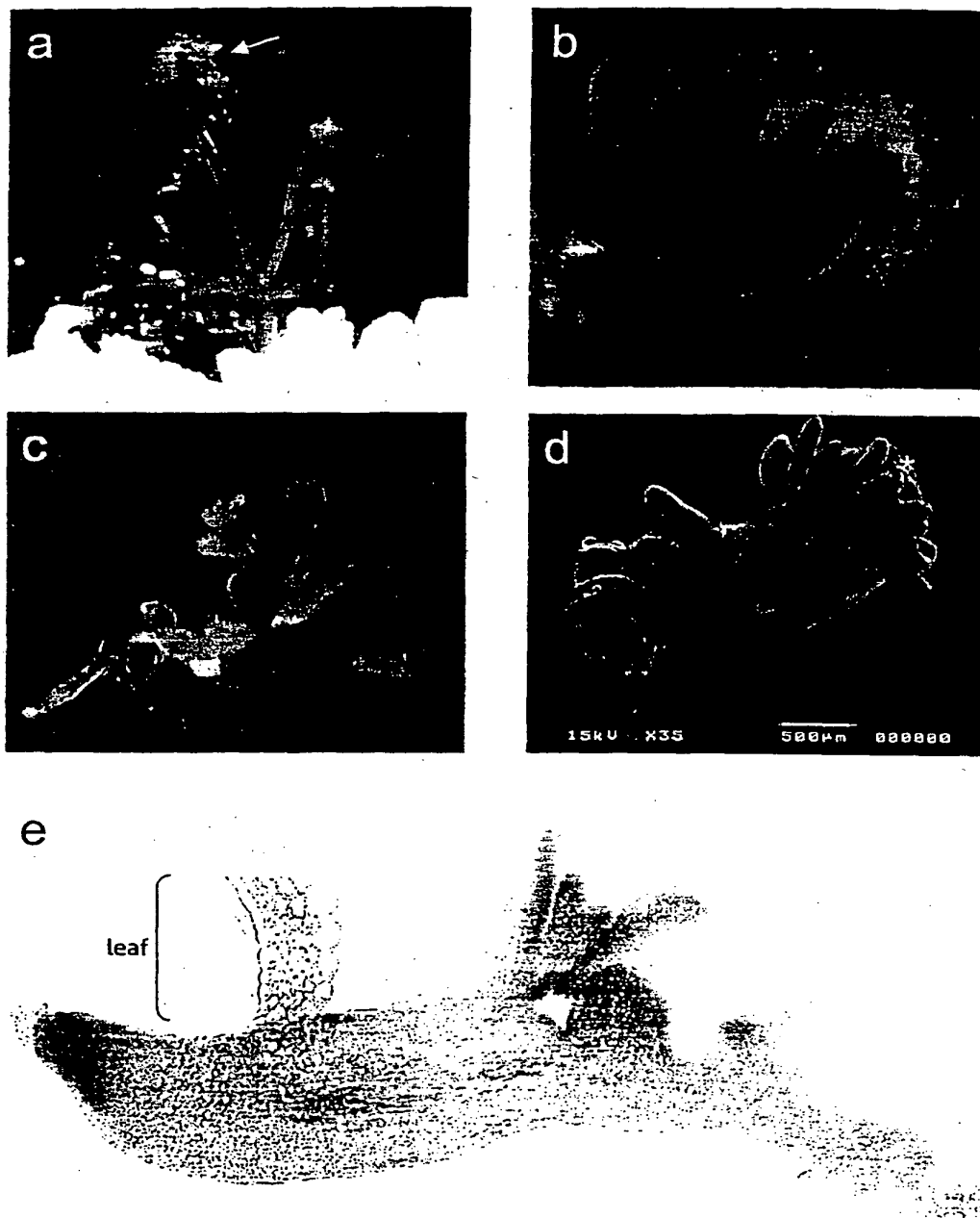




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CA00/00642

FIGURE 7



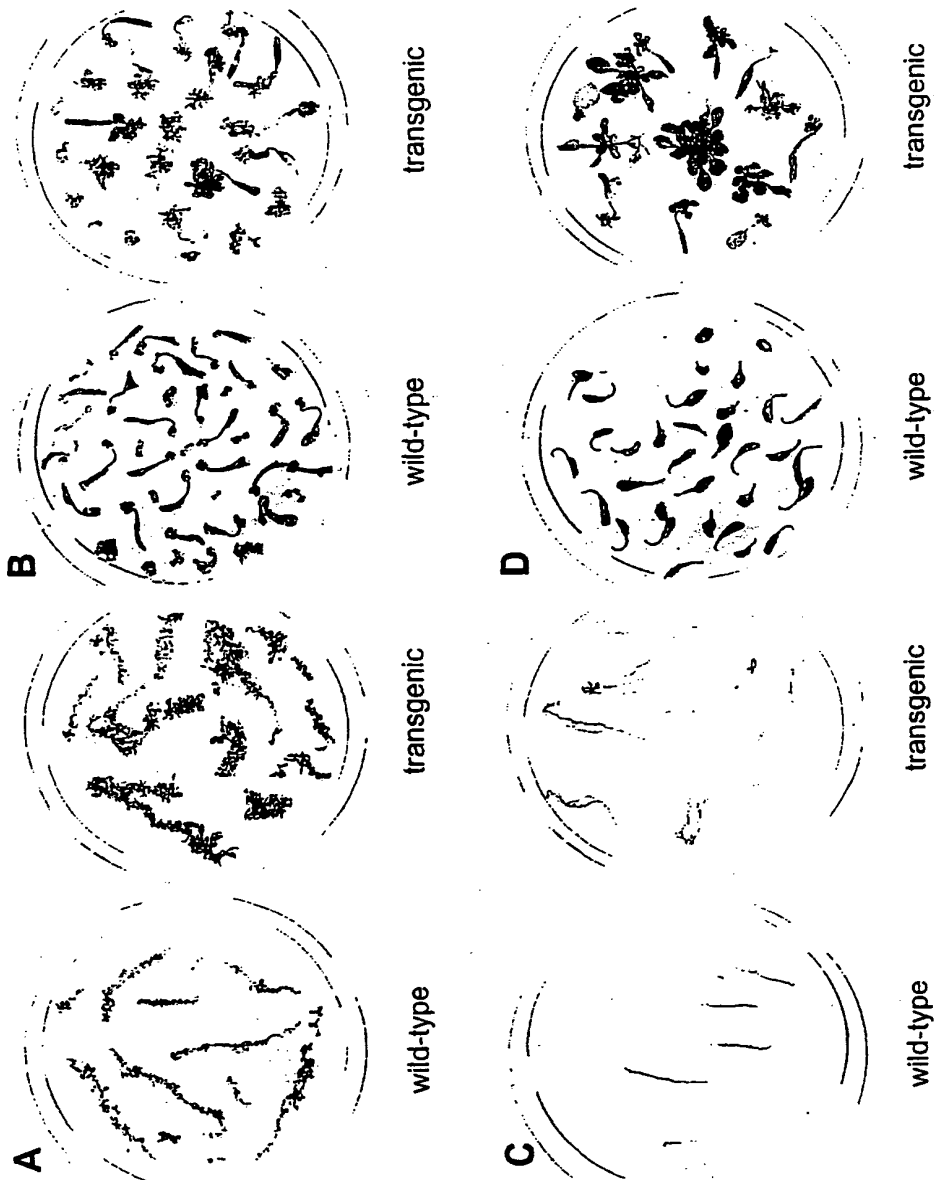
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10/11

FIGURE 8



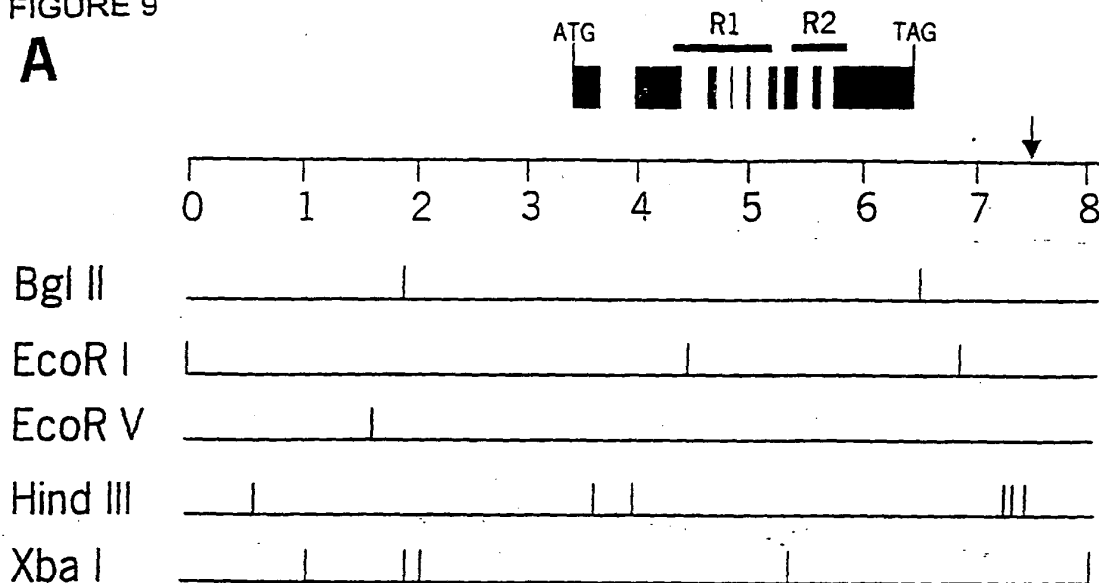
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PCT/CA00/00642

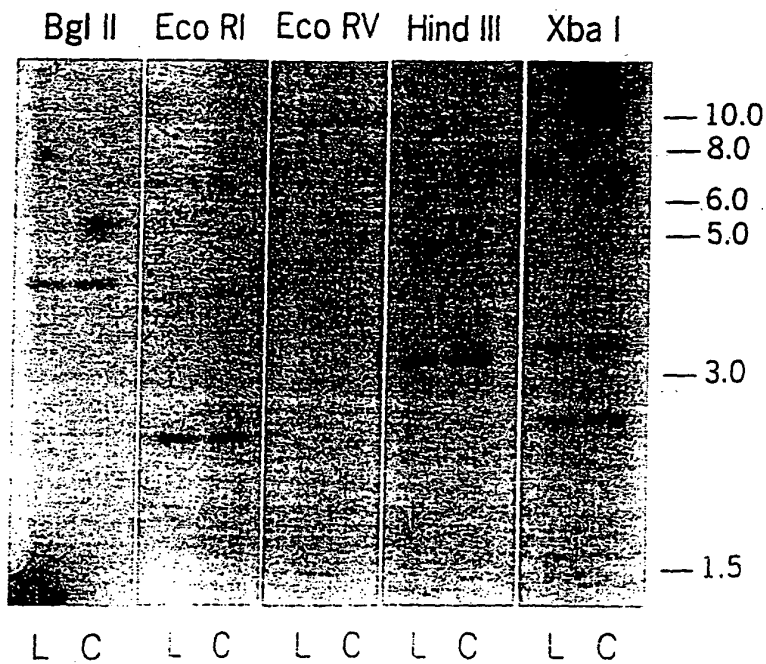
FIGURE 9

**A**



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**B**



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